

**Ultrasound - Assisted Botulinum
Toxin Injection for Neuromuscular
Disorders in Limbs**

Feedback - June 2014

Ultrasound - Assisted Botulinum Toxin Injection for Neuromuscular Disorders in Limbs

This unique two-day course provided the participant with the required knowledge and information about the indications and technique for injecting botulinum toxin in patients with neuromuscular disorders in limbs.

With a high tutor-to-participant ratio, this practical course was delivered using a combination of demonstrated functional and ultrasound anatomy, with interactive small group discussions and ultrasound-assisted injection of botulinum toxin on unembalmed freeze-preserved cadavers, under direct supervision by consultant surgeons. Patients were not used on this course.

On completion of the course, the participant are able to:

- Understand the pertinent pathophysiology of neuromuscular disorders in limbs.
- Appreciate the pharmacology and action of botulinum toxin.
- Demonstrate the indications for injecting botulinum toxin in patients with neuromuscular disorders in the limbs.
- Appreciate the contraindications, risks and limitations of this procedure.
- Apply anatomy knowledge to aid ultrasound-assisted botulinum injection in limbs.

Course Information

Course date: 21st and 22nd June 2014

Venue: Anatomy Department,
Cardiff University,
Wales, UK

Attendance: 11 Delegates

Aimed at:

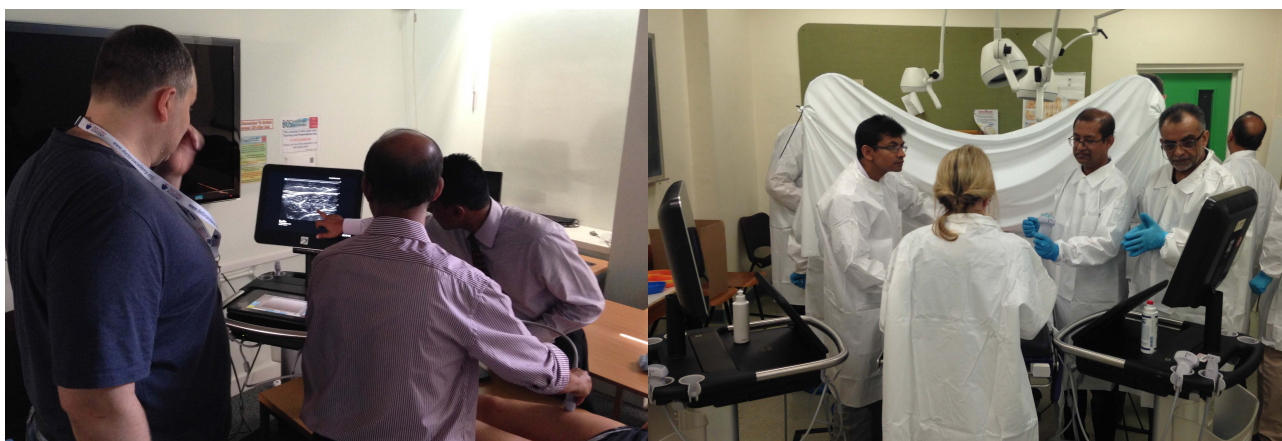
- Consultants
- Speciality Registrars
 - ST3
 - ST4
 - ST5
 - ST6
 - ST7
 - ST8
- Registrar-level doctors
- Specialist Nurses
- Physiotherapists
- Occupational Therapists

Relevant to the following disciplines:

- Paediatrics
- Elderly care
- Stroke unit
- Neurology
- Orthopaedic surgery
- Plastic surgery

Course fee: FREE

Sponsored places available through



Course Programme

Day 1

1000 – 1015	Welcome, Registration and Coffee
1015 – 1100	Gross Anatomy of the upper & lower limb Prof Stuart Enoch
1100 – 1200	Ultrasound anatomy of the upper limb Dr Peter Mullaney
1200 – 1300	Ultrasound anatomy of the lower limb Dr Ramakrishna Kishore

1300 – 1345 **Lunch**

1345 – 1500	USS practical Miss Clare Carpenter
1500 – 1530	An overview on Botulinum treatment Miss Clare Carpenter

1530 – 1545 **Break for refreshments**

1545 – 1645	Botox and its use in the upper & lower limb Miss Clare Carpenter
1645 – 1650	Summary and Closure

End of Day 1

Course Programme

Day 2

0830 – 0930 **USS anatomy review**

0930 – 1045 **USS practical sessions (Small group teaching)**
Mr Dean Boyce
Mr Robert Freeman
Miss Clare Carpenter

1045 – 1115 **Coffee**

1115 – 1300 **Cadaveric Workshop in the Dissection Room**
Mr Dean Boyce
Mr Robert Freeman
Miss Clare Carpenter

1300 – 1330 **Lunch**

1330 – 1530 **Cadaveric Workshop in the Dissection Room**
Mr Dean Boyce
Mr Robert Freeman
Miss Clare Carpenter

1530 – 1545 **Closure, remarks and assessment**

End of Course

Faculty

Mr Dean Boyce

Consultant Plastic Surgeon
Morrison Hospital, Swansea

Ms Clare Carpenter

Consultant Orthopaedic Surgeon
University Hospital of Wales, Cardiff

Professor Stuart Enoch

Programme Director
Doctors Academy Group

Mr Robert Freeman

Consultant Plastic Surgeon
Robert Jones and Agnes Hunt Orthopaedic Hospital, Oswestry

Dr Ramakrishna Kishore

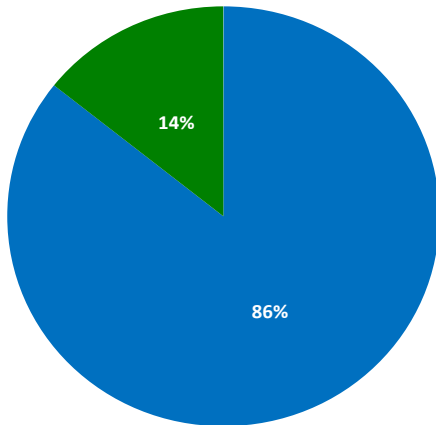
Consultant Musculoskeletal Radiologist
University Hospital of Wales, Cardiff

Dr Peter Mullaney

Consultant Musculoskeletal Radiologist
University Hospital of Wales, Cardiff

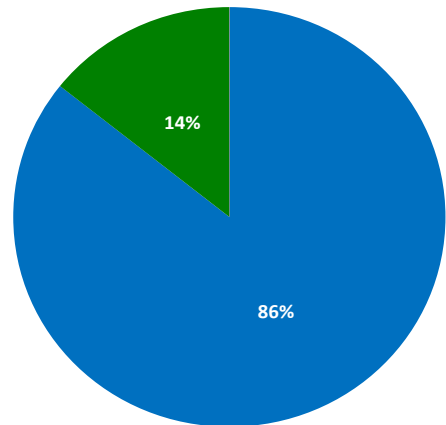
Overall Teaching Feedback

Upper Limb (Theory)



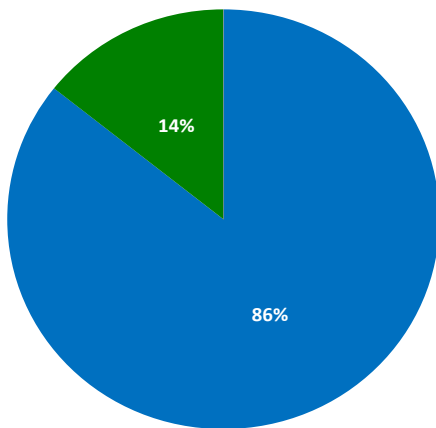
■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

Ultrasound Demonstration of Upper Limb



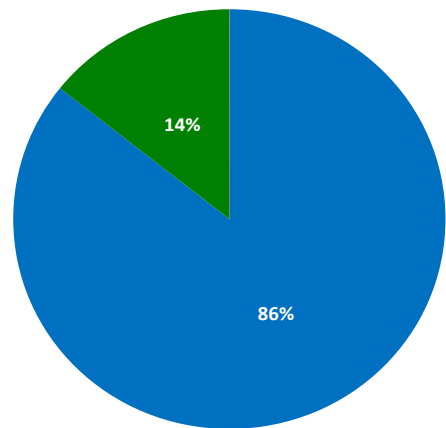
■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

Lower Limb (Theory)



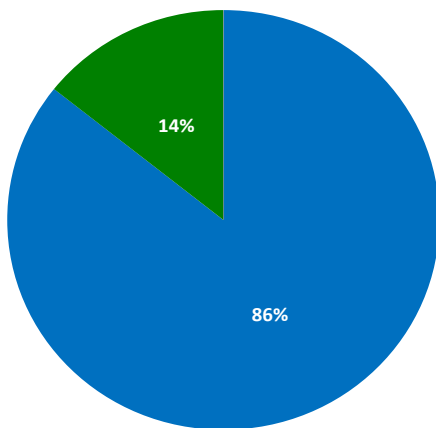
■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

Ultrasound Demonstration of Lower Limb



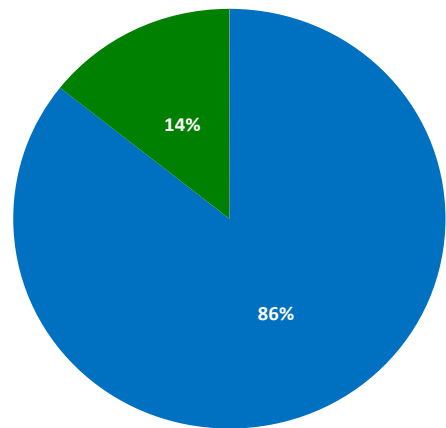
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Practice of Upper Limb Structures Using Ultrasound



■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

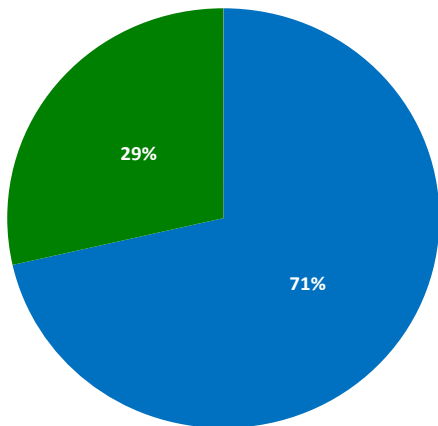
Practice of Lower Limb Structures Using Ultrasound



■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

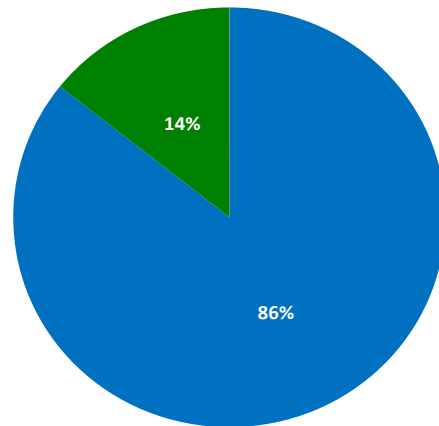
Overall Teaching Feedback

Cadaveric Workshop – Upper Limb



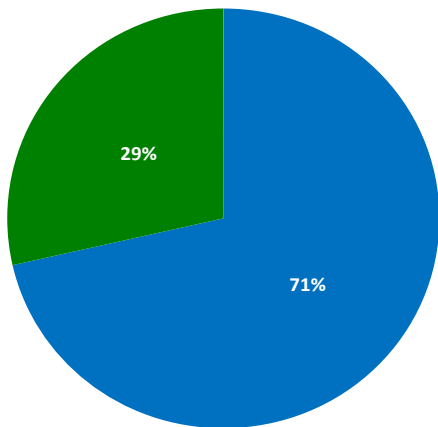
■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

Cadaveric Workshop – Lower Limb



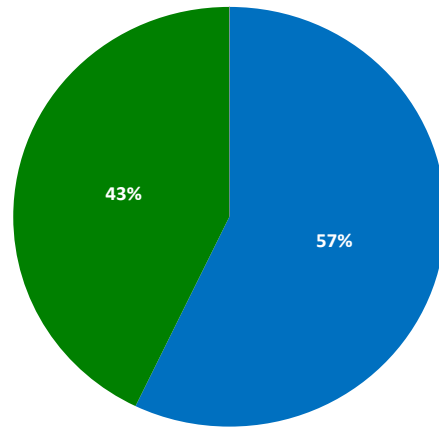
■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

Injection Technique in Cadaver – Upper Limb



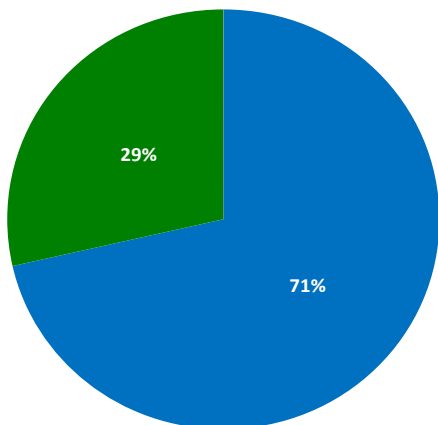
■ Excellent ■ Very good ■ Good ■ Fair ■ Poor

Injection Technique in Cadaver – Lower Limb



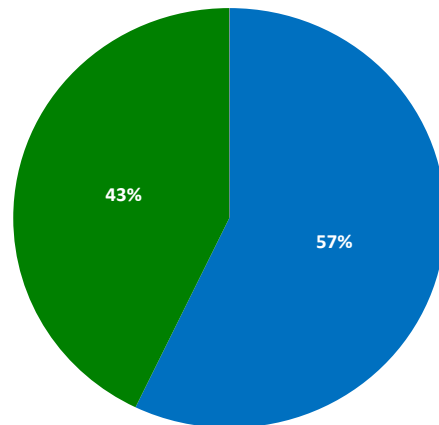
■ Excellent ■ Very good ■ Neutral ■ Fair ■ Poor

Was the Content of the Course:



■ Excellent ■ Very Good ■ Good ■ Fair ■ Poor

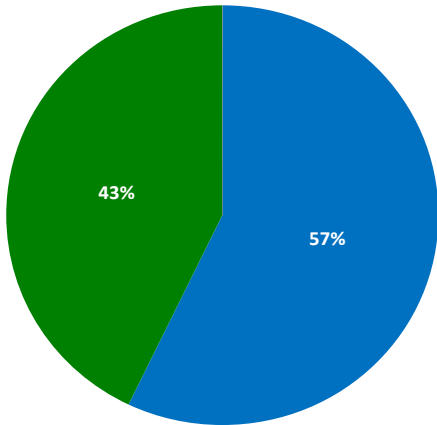
How was the Clarity of Demonstrations?



■ Excellent ■ Very Good ■ Good ■ Fair ■ Poor

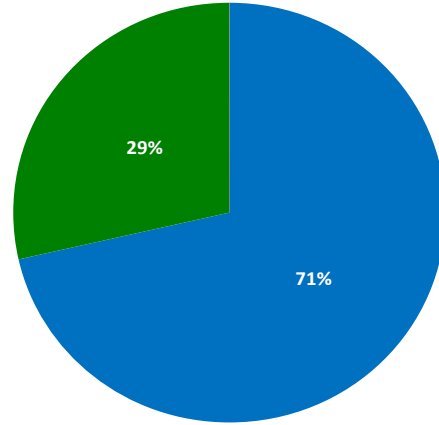
Overall Teaching Feedback

Did you Get Sufficient Opportunity to Practice with the Ultrasound Machines?



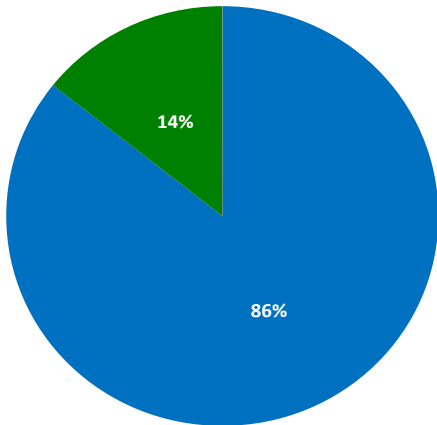
■ Most certainly ■ Certainly ■ Neutral ■ Limited ■ Not at all

Did You Get Sufficient Opportunity to Practice on the Cadaver?



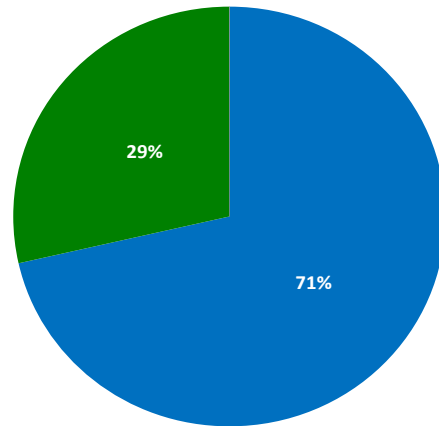
■ Most certainly ■ Certainly ■ Neutral ■ Limited ■ Not at all

How would You Rate the General Academic Standard of the Tutors?



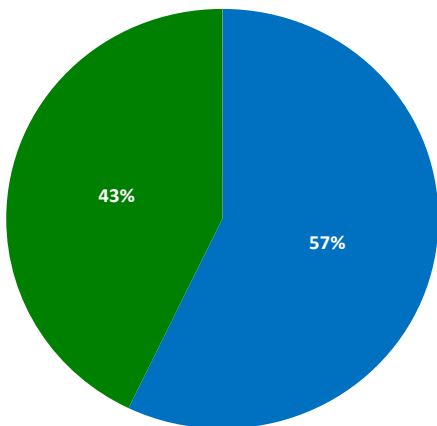
■ Excellent ■ Very Good ■ Good ■ Fair ■ Poor

How do You Rate the Relevance of the Course to Your Career?



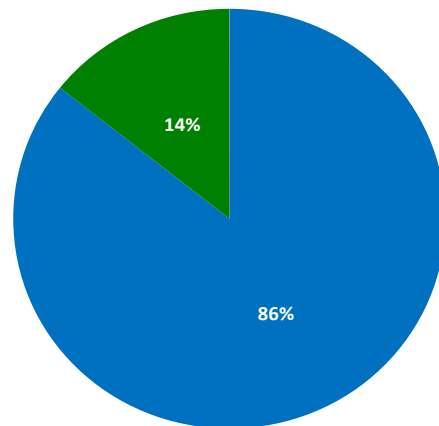
■ Very relevant ■ Mostly relevant ■ Neutral ■ Somewhat relevant ■ Not

Did the Course Meet Your Objectives?



■ Most certainly ■ Certainly ■ Neutral ■ Limited ■ No way

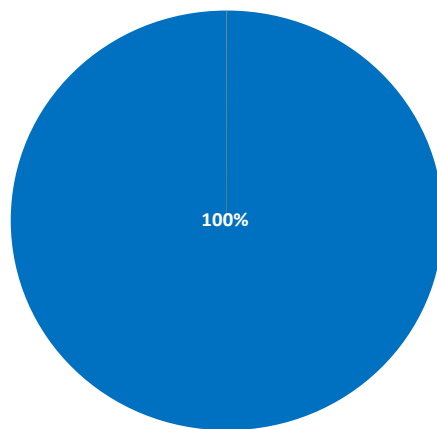
Would You Recommend this Course to a Friend?



■ Most certainly ■ Certainly ■ Neutral ■ Maybe ■ No way

Overall Teaching Feedback

Do you Think this Course was Worth Your Time?



■ Most certainly ■ Certainly ■ Neutral ■ Yes, I think so ■ No way



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- Future Surgeons: Key Skills (RCSEd delivered)
- Intercollegiate Basic Surgical Skills (RCSEd delivered)
- MRCP PACES Part 2
- MCEM Part A
- FRCS (General Surgery) Exit Exam
- Intensive Surgical Anatomy Revision
- Training the Clinical Anatomy Trainer - Level 1
- Training the Clinical Anatomy Trainer - Level 2
- Surgical Anatomy of Important Operative Procedures
- Surgical Revision Course for Final Year Medical Students
- Medical Revision Course for Final Year Medical Students
- Clinical Anatomy as Applied to Trauma and Emergency Medicine
- Cadaveric Ultrasound-guided Musculoskeletal Intervention Course
- Ultrasound-Assisted Botulinum Toxin Injection for Neuromuscular Disorders in Limbs
- Live Advanced Laparoscopic Colorectal Course



Key Events:

- International Medical Summer School
- International Academic Research Conference
- World University Anatomy Competition

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